

GV Ethernet Tally Receiver User's Guide

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1 Ethernet Tally Receiver Overview

The Ethernet Tally Receiver application is designed to display tally data transmitted from a K-Frame or K-Frame simulator to a connected tally client. The receiver provides an interface for establishing a connection, which initiates the transfer of tally packets to the receiver. Once the connection is established, the receiver displays the data received and updates that data in real time as relevant changes are made on the K-Frame. Additionally, the Tally Receiver supports sending packets to the K-Frame to request either additional information or modification of specific values in the K-Frame.

2 Establishing a connection

The tally receiver displays connection information in a box near the top, and allows input of a K-Frame IP Address. By clicking in the ip address area, an ipaddress may be typed in. To connect to a K-Frame simulator running on the same pc, use ip address 127.0.0.1. If connecting to a remote K-Frame, use the ip address of the K-Frame system. When enter is pressed, the receiver will attempt to connect to the K-Frame at that ip address.



Once a valid ipaddress is set in the Frame IP Address window, the connection may be established, or terminated, by double-clicking on the Connection Status light. The light will be white when the receiver first starts up, turn green when a connection is established, and turn red when the connection is terminated. The Tally Receiver will save the ip address last used, along with some debugging settings, in the config.xml file.

The Reconnect light, when green, will cause the Tally Receiver to automatically attempt to reconnect to the current ip address whenever a connection is lost. This reconnect attempt occurs at most once every two seconds.



The Tally Receiver will subscribe to the suite(s) selected at the time the connection is initiated. Modifying the subscribed suites after a connection is established is done via the 'Pkt Request' selection.

3 Logging

The Tally receiver will, by default, log all packets received from the K-Frame. This file, packet.xml, is located in the c:\K-FrameLog folder on the system. This file can be very useful in tracking down tally problems, as it provides the raw xml data received from the K-Frame. If logging is not desired, it may be disabled by editing the config.xml file in the Tallyreceiver folder, and setting "packetlogging" to "False".

4 Authentication

The authentication button displays the authentication packet information on the protocol version and system that is currently connected.

Tally Receiv	er GV - 10.37.140.92 - V1.4.0.0	-	
Frame IP	Address Connection Sta	tus Reconnect Suite	Connected to frame 127.0.0.1
127.	0.0.1		Heartbeat Count: 0019
Authenticatio	Protocol	GV Ethernet Tally	
Configuratio	n Version	3.0	
Suites	Manufacturer	Grass Valley, A Belden Brand	
Eng Sources	Model	GV K-Frame X - 9M/E	
eDPM Contri	System Version	V14.0.0d33	
VPE Contrib			
Outputs			
Log Sources			
Pkt Request			



5 Configuration

The configuration button displays the inputs and outputs of each ME and each eDPM in the system.

Tally Receiver GV - 10.37.140.92 - \	V1.4.0.0			
Frame IP Address Connect	tion Status Reconnect	Suite C	Connected to frame 127.0.0.1	
127.0.0.1		● 3 ● 4 ● All	eartheat Count: 0019	
Authentication Input 1 ME key1. Configuration Eng Sources eDPM contrib VPE Contrib Outputs Log Sources Pkt Request	2 3 4 5 -fill key1-cut key2-fill key3-cut key3-fill k fill ch1-cut ch2-fill ch2-cut ch3-fill c 2 3 4 5 -A PgmB PgmC PgmD PywA MA eDPMAK eDPMC eDPMCK	6 7 8 ey3-cut key4-fill key4-cut k h3-cut ch4-fill ch4-cut o 6 PvwC	9 10 11 12 13 14 key5-fill key5-cut key6-fill key6-cut BkgdA BkgdB ch5-fill ch5-cut ch6-fill ch6-cut	15 16 17 18 BkgdC BkgdD BkgdU1 BkgdU2

6 Suites

The suites button displays the ME's and eDPM's that are currently acquired on the system. Tally data is only sent for acquired resources. For details on how to acquire resources, see the Ethernet Tally "GettingStarted.docx" document.

Tally Receiver GV - 10.37.140.92 - V1.4.0	.0							
Frame IP Address Connection	Status Reconnect		Suite	Connecte	ed to frame 127.0	.0.1		
127.0.0.1		• • • • • •		Heartbeat	Count: 0058			
Authentication	Suite: 1 # VI	PEs: 5 Name	e: Suite1		Suite: 2 # VI	PEs: 0 Name	:: Suite2	
Configuration	Туре	Name	Resource		Туре	Name	Resource	
Suites	ME	PGM	ME-A1	_	ME	PGM	ME-B1	
	ME	ME1	ME-A2	_	ME	ME2	ME-B2	
Eng Sources		IVIEZ	ME-CI					
eDPM Contrib	Suite: 3 # VI	PEs: 0 Name	e: Suite3	_	Suite: 4 # VI	PEs: 0 Name	:: Suite4	
VPE Contrib	Туре	Name	Resource		Туре	Name	Resource	
Qutputs	ME	PGM	ME-C1		ME	PGM	ME-D1	
	ME	ME3	ME-C2		ME	ME4	ME-D2	
Log Sources								
Pkt Request								

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7 Engineering Sources

When selecting the Engineering sources, the range of sources to view must be selected. The "Defined" sources range from 1-300, in groups of 48, while the fixed sources range from 301-405 and are all shown when the "Fixed" button is selected.

Tally Receiver GV	- 10.37.140.92 - V	1.4.0.0]
Frame IP Add	ress Connecti	ion Statı	us Reconne	ct		Suite		Connec	ted to fr	ame 1	27.0.0.1						
127.0.0.1			0	• 1	• 2	• 3 •)4 ⊚.	All Heartbea	at Count	: 0058							
Authentication Configuration	Defined	Fixed						Defined So	ources								
	1-48	ID	Name	Video	Key	Туре) Name	Video	Key	Туре	ID	Name	Video	Key	Туре	
Suites		1	1	1	0		17	17	17	0		33	33	33	0		
Eng Sources	49-96	2	2	2	0		18	18	18	0		34	34	34	0		
cing sources		3	3	3	0		19	19	19	0		35	35	35	0		
DPM Contrib	97-144	4	4	4	0		20	20	20	0		36	36	36	0		
	145-192	5	5	5	0		21	21	21	0		37	37	37	0		
VPE Contrib		6	6	6	0		22	22	22	0		38	38	38	0		
	193-240	7	7	7	0		23	23	23	0		39	39	39	0		
Outputs		8	8	8	0		24	24	24	0		40	40	40	0		
	241-288	9	9	9	0		25	25	25	0		41	41	41	0		
.og sources	280 200	10	10	10	0		26	26	26	0		42	42	42	0		
	289-300	11	11	11	0		27	27	27	0		43	43	43	0		
kt Request		12	12	12	0		28	28	28	0		44	44	44	0		
Re nequest		13	13	13	0		29	29	29	0		45	45	45	0		
	From Swr	14	14	14	0		30	30	30	0		46	46	46	0		
	To Swr	15	15	15	0		31	31	31	0		47	47	47	0		
	10 5111	16	116	16	0		32	132	132	0		48	48	48	0		

7.1 Setting Engineering Source Names

'Source Name Control' must be enabled in the Menu, in the Tally Ports tab of the Ports & Devices menu, for name changes to be accepted by the K-Frame (See image below).



Once Source Name Control is enabled for your connection, Engineering source names may be modified by simply selecting the name field of the engineering source you would like to modify, typing in the new name, and pressing <enter>. This will send a packet to the K-Frame instructing it to change the name of that source. The packet will only be sent when <enter> is pressed. Selecting another source, or pressing <esc> will abort entry and revert the value to its original state.





Additionally, selecting 'From Swr' will allow saving of all the current engineering source names in a .csv file for easy editing. Selecting 'To Swr' will allow loading of a csv file and sending all of the names contained within it to the K-Frame. The format of the csv file is best understood by first creating a csv file from the Tally Receiver. For Engineering sources, the .csv file contains the engineering source number, followed by a comma, and then the name of the source. Each additional source is placed on a new line. Only those sources that need to be changed need to be present in the file, as the list does not need to include all sources.

8 eDPM Contributions

The eDPM contributions are suite specific, so the suite to display must be selected. The top portion displays the logical sources connected to each input. The bottom portion shows which inputs are contributing to each of the outputs. A "1" indicates that a given input does contribute to that output. A "0" indicates that a given input does not contribute to that output.

Tally Receiver GV - 10.37.140.92 - V1.4.0.0								
Frame IP Address Connection Status	Reconnect		Suite		Conne	ted to fra	ame 127.0	0.1
127.0.0.1	•	1 0 2	• 3 • 4	i 🎯 Ali	Hoartha	at Countu	0106	
	_	_	_		neartie	·	0100	
Authentication Suite 1 Suite 2				еррм (ontribut	ions Sui	te I	
Configuration Suite 3 Suite 4		1	3	740	740	740	740	
Suites		1	3	740	740	740	740	Cut
Eng Sources	Channels	1	2	3	4	5	6	
eDPM Contrib	cildimicio	1	-	0		0	1	
VPE Contrib		1	1	0	1	0	1	eDPM A eDPM A Key
Outputs		0	0	1	0	1	1	eDPM C
Log Sources		0	0	1	0	1	1	eDPM C Kev
Pkt Request								

9 VPE Contributions

The VPE contributions are also suite specific, so the correct suite to display must be selected. Additionally, the ME to display must also be selected. The top portion displays the logical sources connected to each input. The bottom portion displays which inputs are contributing to each output. A "1" indicates that a given input does contribute to that output. A "0" indicates that a given input does not contribute to that output.

Tally Receiver GV	10.37.140.92	- V1.4.0.0													
Frame IP Addro 127.0.0.1	ess Conn	ection Sta	itus Rece	onnect	1 • 2	Suite 3	4 💿 Ali	Connec	cted to fran	ne 127.0.0	.1			_	
				~				Heartbe	at Count: 0	134					
Authentication	Suite 1	Suite	2 Suit	te 3 Si	uite 4		Ν	IE Contrib	outions						
Configuration	<u> </u>)							12	722	723	740	275	101	Fill
Suites	ME 1		1	2	3	6	13	16	12	722	723	740	275	101	Cut
Eng Sources	ME 2	Bkgd	Α	В	С	D	U1	U2	1	2	3	4	5	6	Keyer
eDPM Contrib	ME 3		1	0	0	0	0	0	0	0	0	0	0	0	PGM A
	ME 4		1	0	0	0	0	0	0	0	0	0	0	0	PGM B
VPE Contrib	PGM		1	0	0	0	0	0	0	0	0	0	0	0	PGM C
Outputs		J	1	0	0	0	0	0	0	0	0	0	0	0	PGM D
Log Sources			0	1	0	0	0	0	0	0	0	0	0	0	PVW A
			0	1	0	0	0	0	0	0	0	0	0	0	PVW C
Pkt Request			0	1	0	0	0	0	0	0	0	0	0	0	LAP A
			0	1	0	0	0	0	0	0	0	0	0	0	LAP B
			0	1	0	0	0	0	0	0	0	0	0	0	LAP C
			0	1	0	0	0	0	0	0	0	0	0	0	LAP D

10 Outputs

There are 96 outputs, half of which may be displayed at a time. Select the button to choose which group to display. The logical source that is being sent to that BNC's output is displayed, along with its name and suite.

Tally Receiver GV	- 10.37.140.92	- V1.4.0.0											-			- 0 X
Frame IP Add	ress Conn	ection St	atus Reconn	ect	1 • 2	Suite	• 4 •	Conne	cted to fi	rame 12	7.0.0.1					
127.0.0.1		\bigcirc						Heartbe	at Count	: 0134						
Authentication	1-48	49-9	501-502					Outputs	Tally							
		BNC	Name	Suite	Src		BNC	Name	Suite	Src		BNC	Name	Suite	Src	
Suites		1		1	740		17		1	740		33		1	740	
Eng Sources		2		1	740		18		1	740		34		1	740	
		3		1	740		20			740		35		1	740	
eDPM Contrib		5		1	740		20		1	740		37		1	740	
VPE Contrib		6		1	740		22		1	740		38		1	740	
VPE Contrib		7		1	740		23		1	740		39		1	740	
Outputs		8		1	740		24		1	740		40		1	740	
		9		1	740		25		1	740		41		1	740	
Log Sources		10		1	740		26		1	740		42		1	740	
		12		1	740		27		1	740		43		1	740	
Pkt Request		13		1	740		29		1	740		45		1	740	
		14		1	740		30		1	740		46		1	740	
		15		1	740		31		1	740		47		1	740	
		16		1	740		32		1	740		48		1	740	

11 Logical Sources

The Logical Sources are suite specific, so the correct suite to display must be selected. Only a Suite that is subscribed to should be selected. Additionally, the group of sources to display must be selected. To fit more sources on each screen, an abbreviated list is displayed, with only the Video source and Name for each Logical Source ID given, as shown below.

Tally Receiver GV -	10.37.140.92 -	V1.4.0.0													
Frame IP Addre	ess Conne	ction Status	Reconn	ect	Suite			Connected to f	ram	e 127	.0.0.1				
127.0.0.1		0	0	•1	• 2 • 3	•4 (IIA C	Heartbeat Count	t: 01	38					
Authentication	Suite 1	Suite 2	ID	Video	Name		Vide	eo Name	П	ID	Video	Name) Video	Name
Configuration	Suite 3	Suite 4	1	1	EngSrcName	20	20	20	9	39	39	39	58	58	58
			2	2	Eng2	21	21	21	1	40 41	40	40 41	- <u>59</u> 60	59 60	59 60
Suites	1-76	77-152	4	4	4	23	23	23	i I	42	42	42	61	61	61
Eng Sources			5	5	5	24	24	24	i I	43	43	43	62	62	62
	153-228	229-304	6	6	6	25	25	25		44	44	44	63	63	63
eDPM Contrib			7	7	7	26	26	26		45	45	45	64	64	64
VIDE Contrib	305-380	381-456	8	8	8	27	27	27		46 47	46	46	65	65	65
VPE Contrib			10	10	10	20	20	28	1	47 48	47	47	67	67	67
Outputs	457-532	533-608	11	11	11	30	30	30	i I	49	49	49	68	68	68
			12	12	12	31	31	31	i	50	50	50	69	69	69
Log Sources	609-684	685-760	13	13	13	32	32	32		51	51	51	70	70	70
			14	14	14	33	33	33		52	52	52	71	71	71
Pkt Request	761-809		15	15	15	34	34	34		53	53	53	72	72	72
			16	10	17	35	35	35		54	54	54	/3	73	73
		1.0	1/	18	18	30	30	37		55 56	56	55 56	74	74	75
	From Swr	10 Swr	10	19	19	38	38	38	1	57	57	57	76	76	76



For a complete list of all of the data sent to the tally receiver for each source ID, click on header portion of a specific column of sources. The column will be expanded to take the whole window and display all data sent for that group of sources, as shown below. Clicking the header again will return the window to its original state.

Tally Receiver GV -	- 10.37.140.92 -	V1.4.0.0												×
Frame IP Addre	ess Connec	ction Status	Reconr	nect	1 • 2	Suite 3	4 💿 Ali	Connected to Heartbeat Cou	frame 127.0. nt: 0138	0.1				
Authentication	Suite 1	Suite 2	ID	Туре	Video	Patch	Name	Panel	OLED	Menu	VPE	Output]	
Configuration	Suite 3	Suite 4	20 21	Eng Eng	20 21	0 0	20 21							
Suites	1-76	77-152	22 23	Eng Eng	22 23	0	22 23							
Eng Sources	153-228	229-304	24 25 26	Eng Eng Eng	24 25 26	0 0 0	24 25 26							
VPE Contrib	305-380	381-456	27 28	Eng Eng	27 28	0 0	27 28							
Outputs	457-532	533-608	29 30	Eng Eng	29 30	0 0	29 30							
Log Sources	609-684	685-760	31 32 33	Eng Eng Eng	31 32 33	0 0 0	31 32 33							
Pkt Request	761-809		34 35	Eng Eng	34 35	0 0	34 35							
	From Swr	To Swr	36 37	Eng Eng	36 37	0 0	36 37							
			38	Eng	38	0	38							

11.1 Setting Logical Source Names

'Source Name Control' must be enabled in the Menu, in the Tally Ports tab of the Ports & Devices menu, for name changes to be accepted by the K-Frame (See image below).

K-Frame Menu				1001	115	1.25	-		_			• ×
Pbus GPI	Motion Associated I	Panel Disconnected										
	Tally Contribution			Source		Tally Cli	ents					
Ports & Devices Eng Setup	Ethern	Connec et Tally	tion Status	Name Control		S 1	S2 S3	S4				
Source Definition Eng Setup	1 127.	0.0.1	Enable	Enable		0	0		ally Receiver GV 4.0.0	′		
Mode Keyer	2 0.0	.0.0	Enable	Enable		0	••	•				
MEs Source Ops	3 0.0	.0.0	Enable	Enable		0	••	•				
Mode ME Acquire	4 0.0	.0.0	Enable	Enable		0	••	•				
Resources Eng Setup	5 0.0	.0.0	Enable	Enable		0	• •	•				
Eng Setup Status												
Eng Setup	PBus Ports GPI Outpu	Its External Devices	Tally Ports	Editor Ports				Mary -	TOI COM			
Clear History												
History Favorites	Eng Login Video I/C	Source Definition Outputs	Ports & Devices	Switcher Tally Route	r ClipSto Config	re Video Settings	Node Settings	Install Options	Test Patterns	Status	Save Load	Acquire Resources
eDPM SWR	User Setups File Ops	E-MEM & Timeline	Macros	Source Ops ME	Keye	rIDPM	Wipes	Copy Swap	Devices	Image Store	Router	Eng Setup

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Once Source Name Control is enabled for your connection, names may be modified by selecting the expanded view of the logical source names, selecting one of the name fields you would like to modify, typing in the new name, and pressing <enter>. This will send a packet to the K-Frame instructing it to change the name of that Logical source name. The packet will only be sent when <enter> is pressed. Selecting another source, or pressing <esc> will abort entry and revert the value to its original state.

Tally Receiver GV -	10.37.140.92 -	V1.4.0.0										_	
Frame IP Address Connection Status Reconnect Suite								Connected to frame 127.0.0.1					
127.0.0.1				•	1 • 2	• 3 • 4	4 © All	leartbeat Co	unt: 0140				
Authentication	Suite 1	Suite 2	ID	Туре	Video	Patch	Name	Panel	OLED	Menu	VPE	Output	
Configuration	Suite 3	Suite 4	1 2	Eng Eng	1 2	0 0	EngSrcName Eng2	P1	OLED1	Menu1			
Suites			3	Eng	3	0	Log3	P3	O3	M3			
	1-76	77-152	4	Eng	4	0	4						
Eng Sources			5	Eng	5 6	0	5 6						
eDPM Contrib	153-228	229-304	7	Eng	7	0	7						
	205.200	201.455	8	Eng	8	0	8						
VPE Contrib	305-380	381-456	9	Eng	9	0	9						
Outputs	457-532	533-608	10	Eng	10	0	10						
			12	Eng	12	0	12						
Log Sources	609-684	685-760	13	Eng	13	0	13						
			14	Eng	14	0	14						
Pkt Request	761-809		16	Eng	15	0	15						
	<u></u>		17	Eng	17	0	17						
	From Swr	To Swr	18	Eng	18	0	18						
			19	Eng	19	0	19						

Additionally, selecting 'From Swr' will allow saving of all the current logical source names in a .csv file for easy editing. Selecting 'To Swr' will allow loading of a csv file and sending all of the names contained within it to the K-Frame. The format of the csv file is best understood by first creating a csv file from the Tally Receiver. For logical sources, the .csv file contains the logical source ID, followed by a comma separated list of source names in the following order: Engineering source name for this logical source, Panel name, OLED name, and Menu name. Each additional logical source ID is placed on a new line. Only those sources that need to be changed need to be present in the file, as the list does not need to include all sources.

12 Packet Requests

The Ethernet Tally system supports requests for complete packets of specific types, causing the K-Frame to resend a complete packet of that type. Simply clicking on the button for the type of pkt desired, will send the request to the K-Frame. Additionally, the system supports a 'heartbeat request', which will send back a 'heartbeat' response to signify that the connection is still active. A Tally subscription packet may also be sent, modifying which suites tally data are desired to be sent to the Tally Receiver. Different versions of this packet allow adding suites, or replacing the current subscription with a completely new one. This information may be sent by specifying the suite number, or the name of a suite.